



Indian Farmer
Volume 8, Issue 10, 2021, Pp. 506-507.
Available online at: www.indianfarmer.net
ISSN: 2394-1227 (Online)

POPULAR ARTICLE



Leaf Eating Caterpillar Outbreak on maize in Lilongwe, Malawi (Southern Africa)

Henry Umali, Uzma Manzoor*, Goodwill Nyaane, Gomezgani Kasaro, Sophai Kaonga and Kevin Redombo

School of Agricultural Sciences, Sharda University, Greater Noida

*Corresponding Author: uzma.manzoor@sharda.ac.in

Article Received: 10 October 2021

Published: 15 October 2021

Leaf eating caterpillar commonly known as armyworms are the caterpillar stage of moths belonging to the genus *Spodoptera*. They are called armyworms because when they damage a crop they march along the ground like a vast army of worms in search of more food. They complete their life cycle in one month. The sequence of outbreaks began in mid-December 2016 in Zambia and has spread rapidly ever since. Only time will tell what the full impact of this armyworm invasion will have.

Damage to maize is likely to have the biggest impact on farmers in Southern Africa because it's the main staple food crop in the region. Caterpillars attack all stages of maize crop from seedling emergence to ear development. The young larvae feed in and around the whorl leaves by scraping and skeletonizing the upper epidermis leaving a silvery transparent membrane resulting into papery spots. The damage also results in pinhole symptoms on the leaves. Older larvae remain and feed inside the whorl. In the case of severe attack, leaves including midribs are eaten away and the fields look as if grazed by the cattle. Larvae excrete faecal matter in the form of pellets which are seen in the plant whorls. Larvae also damage immature ears. The incidence is more severe when good rain follows dry period. Damage during vegetative stage leads to leaf damage but if damage happens during reproductive stage it may damage tassels or may bore inside the corn ear and eat away the kernels. The whorl damage results in significant yield losses while ear feeding results in both quality and yield reduction. Prevention is better than cure, farmers are recommended to prevent the outbreaks rather than betting on treating it. Leaf eating caterpillars can be controlled by both chemical and bio pesticide, both pesticides have their own differences. Chemical pesticides like emamectin benzoate offer a broad range of pests it controls but can have negative effects on the environment. Variable efficacy may be due to genetic resistance, or it might be as a result of the way in which the spray is applied.

The Fall armyworms are often inaccessible to insecticides because of their tendency to hide in the whorls and reproductive parts of the host plant. However non-chemical, biological pesticides that could also be effective are pesticides derived from natural diseases of insects, such as viruses, fungi and bacteria. There is development of a highly effective biopesticide against African armyworm in Tanzania. But this still needs to go through the commercialisation and registration process, which is both costly and time consuming. Biopesticides tend to be effective against a much narrower range of species than chemicals, which is good for the environment but it means that they can only be used for a limited number of pests, often making them more expensive than chemicals.

There are alternative approaches, genetically modified Bt maize is grown to combat the Fall armyworm in the Americas. This may also be an option for Southern Africa but many parts of Africa do not allow or welcome GM varieties. And Fall armyworm has also evolved resistance to some Bt toxins, with some evidence for cross resistance. The other alternative approaches are indigenous approaches which includes the use of local plant extracts like *Tephrosia vogelli* and neem, to produce botanical pesticides, crop rotation and the addition of sand to maize whorls where armyworms are feeding.